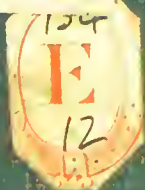


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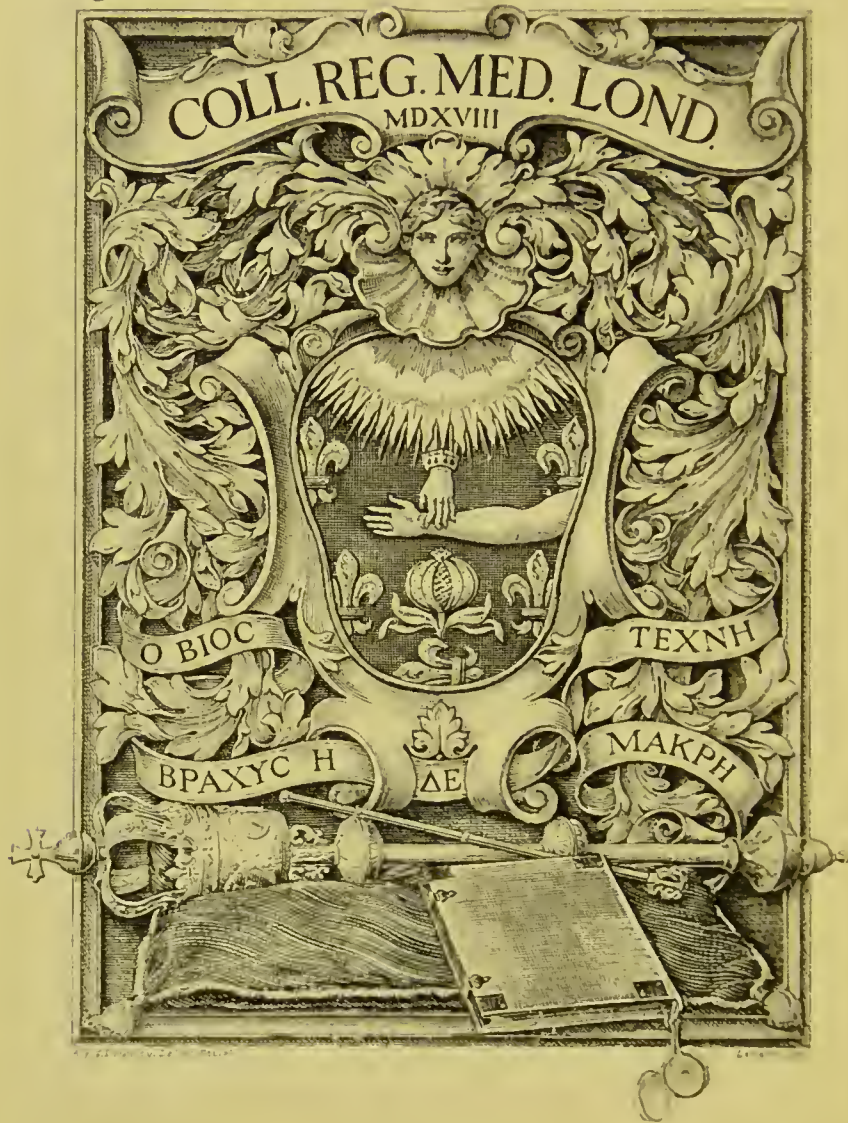



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AIR, LIGHT AND SUN BATHS

AIR, LIGHT AND SUN BATHS

IN THE

Treatment of Chronic Complaints

BY

DR. A. MONTEUUIS

TRANSLATED FROM THE FRENCH BY

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TRANSLATOR'S PREFACE.

The present is a favourable time to bring before the British public a work dealing with the natural treatment of disease, and the methods to be employed in securing the greatest benefits to the physical body. True, up to quite recently the attempts made in this direction have been mainly confined to foreign sanatoria, but no valid reason exists why our own countrymen should not apply these remedies, with certain modifications owing to difference in climate, both in sanatoria and in home life.

The ideas given out by Dr. Monteuuis will be found of supreme advantage to all who prefer natural to artificial remedies, regarding it as of greater importance to rebuild a new body, when the old frame has, for years past, been accumulating the germs of disease and death, rather than to patch up the human

frame by means of drugs, which so often remove the existing effects—in the form of suffering and pain—merely to bring about others, after a time, of a more virulent nature.

Dr. Monteuuis, a physician of great experience, left his practice at Dunkerque to devote himself to the more useful task of effecting radical cures by means of the natural agencies ; air, light and sun baths, and, with this object, he undertook the management of a sanatorium at Sylvabelle, on the French Riviera, where he has been enabled to carry out his principles most successfully.

This small work is issued in the hope that similar attempts may be made in Great Britain by those who find it impossible or inconvenient to proceed to a southern clime ; or, at any rate, that some of the thoughts contained in his essay may take seed and bear fruit, and thus something practical be effected in the direction of building up stronger and healthier bodies, more fitted than before to accomplish the work of life.

F. R.

Air, Light and Sun Baths

in the

Treatment of Chronic Complaints.

PART I.

“Light, air and sun baths will constitute the principal remedies of the twentieth century.”

This prophecy of an eminent Swiss doctor gives some idea as to the mental trend of many nature physicians in Switzerland, and the important position attained by this system of treatment in chronic and nervous disorders.

“The system is so simple,” writes Dr. Nyssens of Brussels, “so effective and agreeable, that the length of time it takes to obtain a footing is surprising.”

The fact of its being as yet a new system prevents its becoming immediately popular; no thoughtful practitioner can look upon our

medical acquisitions as incapable of being overthrown. Such a one will be independent enough to differ from the general opinion of his times, and will certainly not justify Stendhal's sarcastic remark about the French: "Every man who dares to think for himself is a hero."

Light baths were in general use in the times of the Romans. The patient, either lightly clad or with bare body slightly smeared with ointment, was stretched on a mattress and exposed to the sun. A special portion of the house, called a *solarium*, was reserved for these light baths, corresponding somewhat to our balconies.

Accounts of this treatment have often been given. Arnold Rikli is regarded as the inventor of these baths; for over half a century he has been prescribing atmospheric treatment.

The study of the history of medicine, and specially of Priessnitz's ideas, has modified my own opinions as well as those of other nature physicians. I know of no more suggestive introduction to a study of natural medicine than an investigation into the Austrian peasant's ex-

planation of the treatment of disease by natural methods.

Priessnitz's fundamental idea, which must remain the basis of all natural medical treatment, is that "recovery is effected by increase of oxidation," which he called more simply, animal heat or caloric force, and this increase is to be effected by such vital stimulants as air, light, sun, water, exercise, food and medicine.

Amongst healing agencies, water must be placed in the first rank ; its many effects and various simple easy methods of application constitute it the best of stimulants. The same main idea justifies, according to Priessnitz, every method of using water. "When cold water is applied," he says, "it is by no means the cold which cures ; on the contrary, it is the heat generated by the reaction, whilst the restorative agent is Nature herself."

It is Nature that cures, says Hippocrates, whilst Priessnitz explains the method which consists in increasing oxidation ; he shows that the body, by means of its heat, eliminates refuse and assimilates new restorative elements. In proof of his faith in natural processes and vital

agencies, he again says, "All cures can be better effected by external than by internal means." As regards atmospheric treatment, he has left behind the following memorable words : "Had I not water I should cure by means of air." Such language is certainly not that of a charlatan, and the admiration of Winternitz, Professor of Hydropathy at Vienna, and the enlightened enthusiasm of Neuens as expressed in his recent work on the Austrian peasant, can easily be conceived.

I must beg my readers' pardon for rescuing these few words from an altogether unmerited oblivion ; my excuse is that I deem them the best introduction to an account of my recent journey to Germany. I was all the time in a region of natural medicine, still far too deeply embedded in the rut of empiricism.

The practitioner who has no doctrinal notions is like a mariner without a compass, tossed about here and there, with only the prestige of his diploma to distinguish him from all kinds of impostors.

M. Roux judiciously observes, "This method of healing remains at a standstill because so

many of the sanatoria abroad are under the control of enthusiasts who have no notion of science : *naturpfuscher*, as the Germans call them, who desire to help others through having been restored to health themselves."

It is because they have not understood the system in its real bearing, and have been unable to apply it, that great success is obtained by only a few scientific physicians who have learnt the art of systematic observation.

I have been fortunate enough to meet with one of these modest, though enlightened practitioners, Dr. Oberdörffer, of Godesberg-on-Rhine, and with his assistance to study atmospheric treatment of disease in his establishment. There I became familiarised with this most fruitful and practical system, and at the same time reaped the results of his ten years' experience. How true it is that our best lessons are always object lessons.

Anyone who has undergone an air treatment will recognise the value which systematic air, light and sun baths must have for a patient suffering from nervous troubles, once he has tried them and realised how great a measure

of success is possible in the treatment of all nervous and chronic disorders.

I am not surprised, consequently, to hear adherents of this system declare that these baths are the great restoratives of the twentieth century ; year by year I see in ever increasing numbers sufferers seeking abroad for that relief they look for in vain at home.-

Other times, other stimulants.—In a previous work I remarked, “ The practitioner is often quite unaware of the importance of stimulating the functions of the skin by physical means.” All the same, this is one of the most natural sources of physical energy, to which we should have recourse every time bodily depression comes about.

Nothing can exceed the value of this powerful restorative which can be applied so easily, not merely as a tonic, but as the best means of decongesting all the abdominal organs, and the surest and most energetic for strengthening and soothing the nervous centres.

To realise the importance of the functions of the skin, it must be remembered that no other organ of the body can stimulate or secrete to such an extent as the epidermis.

“Still, there is one absolute condition necessary to obtain beneficial results, and this, as is the case with everything affecting the healing art, is so to prescribe *that the dose may be proportioned to the patient's power of reaction.*”

Nervous and debilitated persons are so sensitive to stimulating influences that light, air and sun baths meet with peculiar success in their case.

Nowadays, many patients are so exhausted that they cannot bear the severely tonic effect of water; they require a restorative which will give a sure, though perhaps a slower result, and are obliged to find restorative elements and perfect repose for the nervous centres during the treatment.

The present generation is in especial need of a regimen which will sooth and strengthen the nervous system, as is the case with the atmospheric treatment, one that is not exciting, as is a meat diet so often recommended under the pretence of strengthening the whole system. All these advantages are found combined in the case of patients who go abroad.

Huchard writes in drastic terms, “The

animal food which we use and abuse in increasing quantities is not nourishment, but rather daily poisoning."

Most foreign sanatoria for the treatment of nervous and chronic cases have combined these three therapeutic elements: *The air cure; recreation, and a greater or less abstinence from meat.* From the very first, such a rational, common-sense combination has insured the success of the atmospheric treatment, and subsequent study and observation, as I shall prove, have shown how efficacious it is in quite unexpected quarters.

ATMOSPHERIC TREATMENT.

Rikli, who contributed so powerfully to the popularising of this treatment, speaks of it in the following terms: "Man is made to live in the open air; therefore when exposed to the action of light, air and sun, he is in his real element. As a natural agent, water takes only an inferior place, above it comes air, whilst light takes precedence of every other natural agent, and is the great essential wher-

ever organic life exists. The nervous system, which is an inherent principle of our organism, is acted upon by light, especially through the skin. The purpose of the air treatment is the strengthening of the skin by restoring its natural functions and the vitality and elasticity it has absorbed from its primitive state when directly in contact with the skin."

This effect of direct contact is to produce frequently repeated and prolonged periods of contraction and dilation. Such a revivifying action of the capillaries of the skin is considerably modified by clothing : all the functions of the skin are checked to such an extent that the other organs are obliged to make up for the deficiency and the nervous system, and the vitality of the whole body suffers in consequence.

The object of the air treatment is the restoration to the human skin of the vital energy it has lost in the suppression of all the direct tonic effects of air, light and sun ; cure by natural means is its principle, and this is effected by bringing the epidermis under the influence of these physical agencies, and, as

far as possible, restoring conditions of health by which the skin regains the whole of its functions, becomes animated and strengthened anew, and restores the nervous system to its normal activity.

The application of this treatment rests on a basis of sun, light and air baths, though of course, these are not by any means all the agencies it has at its disposal.

In advocating the air treatment, we include every possible means of enabling the body to come more intimately into contact with the atmosphere, and, if possible, continually hardening it.

On this account mention may be made of all that contributes to such treatment. *Outdoor life in the country*, on the mountains, or at the seaside, comes first. Unfortunately, it is not everyone who can take up a treatment of this kind; all the same, *nothing in the world can replace the action of air*.

The habit of taking deep breaths every time we go out of doors is an excellent one; this should be done quite out in the open, pure air, five or six times a day, and for two or three minutes at a time.

Gymnastic exercises, with bedroom apparatus in front of an open window.

Frequent walks in the fresh, pure air.

Daily exercise, outdoor pastimes and games, which call for movement, agility and endurance. Such exercises, when carried through unconsciously, day by day, will greatly develop the different muscles and limbs.

All these are easy and excellent methods of taking the open-air treatment.

In the course of his regular practice the family physician will advise his younger patients, encouraging them to take up ball or hoop games, skipping rope, running, horizontal bars, or tennis.

Such details might appear to be superfluous, did not experience prove the contrary. Every time you prescribe outdoor life you waste your breath if you merely give utterance to the simple idea; you must give special instructions as to the means of putting it into practice when circumstances warrant such a step.

In practice, a nature physician's ingenuity is appealed to in a host of ways. Not only

should he prescribe fresh air ; he should also consider how the skin may be brought into constant contact with the atmosphere, quite apart from the time devoted to air, light and sun baths. With this in view, coarse linen, such as Kneipp has rendered so popular, may replace the traditional flannel or underlinen made of material whose mesh is sufficiently porous to allow the skin free action. Pants should be regarded as superfluous or harmful unless they are of a light and porous texture.

Since existence in the open air is incompatible with the demands of daily life, the nature doctor teaches his patients to make their homes as sunny, fresh and well-aired as possible.

The indoor-air treatment is an object lesson so modern that it is anything else than a repetition of what schools have taught us. The traditional method of making our rooms healthy is to leave the windows open until the light and air have penetrated them for a longer or shorter period. . Generally speaking this is insufficient, as the stuffy atmosphere testifies. *A draught* is necessary, as it

changes the atmosphere far more rapidly, and in less than a quarter of an hour complete ventilation is obtained.

Except during the hottest hours of the day, it is of the utmost importance not to shut out the sun from our rooms by means of curtains or blinds. Sunshine is the great purifier of indoor air, and on this account, houses looking to the south are far healthier than those facing the north. As a simple matter of hygiene, we ought to occupy the sunny rooms ourselves and regard as spare rooms those to which the sun cannot obtain access.

Fresh air is not the only thing needed for the rooms in which we sleep. It is the duty of every teacher of hygiene to inquire into our method of dealing with sunshine. Every bedroom ought to be sunny, all window hangings suppressed and the invalid should realise that he needs sunshine even more than those who enjoy ordinary health.

Michelet was right when he said: *Of all flowers the human flower is the one that needs sunshine most.*

We must never weary in our attempts to

bring people to understand that the sun is the great benefactor of humanity, the mighty dispenser of heat, light and life. As the Italian proverb has it: Where the sun is absent, the physician is present.

In all countries good housekeepers are acquainted with the purifying action of the air when they put their bedding and clothes out into the open. This is the best way to eradicate all organic emanations with which they are impregnated, and which give them the fetid odour so familiar to all. In Germany, where this custom is universal, the mattresses are not so large as ours are, so that two small ones fill up the place of one of ours. This is an excellent plan for preventing the present condition of bedrooms, generally such an unhealthy one.

The air treatment is not over when the hours of day are past. Necessarily it has less hold on the epidermis during the night time, but even then it can be constantly, and in a practical manner, applied to the lungs, where its use seems especially indicated in the treatment of all chronic disorders. Max Simon is

right when he says: "Air is the food of the lungs just as bread is the food of the body, the only difference being that the one is inhaled, the other eaten."

This lung food, the first necessity of our very existence, is generally lacking in our industrial centres; certainly our chronic invalids do not get it. Since nothing can take its place, our constitutions become debilitated and our lives and bodies suffer from its absence, victims being recruited from all classes of society.

When a physician makes a call rather early in the morning, even in the houses of the well-to-do, he is often greeted by a noxious odour which, better than a host of arguments, testifies to the unwholesomeness of the dwelling. All the same, the air in large cities is certainly far purer by night than by day, for then all industrial and domestic activity is at an end.

Rikli and his followers found a radical solution to his problem of a vitiated night-air; their patients sleep in the open air in what may be called *aerial huts*. These are made of wood, and open in front; their roofs and

sides contain apertures sufficiently large to allow of perfect ventilation within. Such huts may be seen in most German sanatoria, though they have not yet obtained a footing in France.

There are, however, other ways of establishing the *night-air treatment* which do not clash so much with our customs: leaving the windows open the whole night long, for instance. This practice is not unknown to us, though, so far, it has been mainly used in the case of consumptives only; it can easily be acquired and calls for but few precautions, even in cold weather.

More bedclothes may be used, and many who open their windows at night place an extra blanket within reach. When the temperature suddenly lowers, the cold is liable to arouse the sleeper if this precaution is not taken.

In summer the windows may be flung wide open; when the nights are cooler a blind or curtain will moderate the freshness of the outside air. Rikli recommends closed windows only when the nights are particularly cold or

stormy. "The worst outside air is preferable to the best inside air," he says.

If the cold becomes too intense either partially close the window or open that of the dressing-room; the latter arrangement adapts itself more particularly in cases of illness. Darenberg's advice to consumptives is to take the night air treatment in this way until the thermometer has descended to 39° C. Invalids whose bronchial tubes are not too sensitive may continue the treatment at a much lower temperature.

It is all a question of climate or individual constitution. Everyone should be his own guide, able to regulate his actions according to the climate. What is very important is to get accustomed to the night air during the summer months, and the best way to do this is to sleep in rooms with a southern or south-eastern aspect. One thing to be guarded against is sleeping in a bed situated between the open window and a door or fireplace that is imperfectly closed. With these precautions, dangers from chills are quite imaginary. On returning to a healthier existence, a craving

for pure air is developed which becomes a necessity, and those accustomed to live with open windows experience positive discomfort when circumstances force them to be in closed rooms.

I have dwelt at length on this simplest of practices mainly to call attention to the place it occupies abroad in every-day sanitation, and to emphasise the importance we should attach to it.

For some time past whole generations have been degenerating for lack of pure air, and it would be rendering no mean service to society in general if these hygienic practices of such vital importance were given a wider popularity.

Far from being partisans of the *passive resistance* taught by Richet, we should train the body to an *active resistance*. The human organism is a powerful generator of heat, a real heating apparatus of remarkable intensity ; it is warmed far more by the heat it produces than by that it acquires from outside sources. Most assuredly the night air treatment is a step in the right direction.

GENERAL IDEAS ON AIR, LIGHT AND SUN BATHS.

In atmospheric treatment of disease there are three agencies of such efficacy that they are looked upon as the basis of the whole treatment, and must now be described with the attention their importance deserves ; these are, air, light and sun baths.

Their very names clearly indicate which element plays the principal *rôle*, without, all the same, excluding the two others ; in other terms, the bath adopts the name of the most active agency in operation.

All three include the exposure of the whole skin to the air ; the bath in which air is the chief element is called *the air bath*, *the light bath* is the name of that in which light is the primary and air the secondary element (Rikli terms it the atmospheric bath), whilst finally *the sun bath* is the one in which the whole body is exposed to the rays of a sun powerful enough to produce the effect of a vapour bath. This latter result is essential ; should it be lacking, then the whole process becomes nothing more than a condensed light bath.

Consequently it is not sufficient to expose the body to the sun's rays, perspiration must be brought about.

Mode of Action.—The result of these different baths is an increase of oxidation and a stimulated vital energy. Each one effects this in his own way. In a word, when the whole skin is in direct contact with the atmosphere, the surrounding air, which is in constant motion, is drawing off heat all the time.

Like cold water, though in less degree, *the air bath*, by virtue of the equilibrium of temperature, is continually drawing off heat. To reproduce it the body reacts, both heart and lungs at once accelerate their motion, and every function of the body acquires increased activity, and this in turn increases oxidation, corresponding to the amount of vital energy the subject possesses.

Such are the effects of the simple air bath, effects which can only be produced by the night bath, since they are twofold in the daytime, being combined with the action of light.

The light bath produces the same effects but is more complex in its action. Under the

influence of sunlight and fresh air, the functions of the skin are stimulated to a far greater extent, and beginners who do not take the precaution to note the time they spend in the bath are often inconvenienced by this excessive activity of the skin's functions.

In atmospheric baths the first thing to be sought is the *action of light* which, in the opinion of nature physicians, is far more intense than that of air or of the sun's heat. To such an extent is this the case that medical science has been obliged to create a new department—phototherapy.

Nature physicians have long extolled the power of light. Neuens writes: "Light is the one source of life," and Rikli, speaking of the atmospheric bath, says: "The nervous system absorbs the incomparable and wonderful light of the sun as its most subtle form of nourishment." So life-giving are its effects that the greater the amount of light we absorb, as in summer, for instance, the less solid food we require.

The natives in tropical climes do not eat much solid food, it is light that nourishes them.

“Negroes are better able,” says Neuens, “to absorb the sun’s rays by reason of the colour of their skin and their habit of living half-naked. Notwithstanding their very poor food, their muscular strength is greater than that of white men. In any case their output of physical labour bears no proportion to their diet.

The atmospheric bath accordingly produces far more by means of light than of air, that stimulus of all the functions of the body, the very mainspring of its action. The effect is produced all over the body from the very beginning of the bath.

This was scientifically produced by Dr. Oberdörffer, who took the temperature of a neurasthenic patient under the tongue. At the beginning of the bath the temperature varied between 97 and 97·3° C. Ten minutes afterwards it had risen one degree, at which point it remained all the day, as was seen by repeating the experiment every two hours.

The Godesberg physician treated other patients in similar fashion with exactly the same result—the thermometer always rising

several tenths of a degree. None of these primary effects of the light and air baths are noticeable in *the sun bath*, which, far from absorbing heat as does cold water, increases it, bringing about perspiration, and thus eliminating the refuse of the body.

It is by an entirely different method that the sun bath stimulates the functions of the skin and increases the oxidations.

General Advantages of Atmospheric Treatment.

At the present time this treatment holds such an important place abroad that, when combined with hydropathy, it forms in the hands of Swiss and German doctors, the groundwork on which all chronic and nervous diseases are treated.

These facts dispense us from all necessity for entering into every detail as regards these sun, light and air baths; suffice it to say that after ten years of practical experience Dr. Oberdörffer affirms that the general effects of the atmospheric, or light and air baths, are as powerful as hydropathy.

In treatment and actual practice, when deal-

ing with nervous patients, who are frequently hypersensitive and difficult to manage, the manner in which they accept prescriptions is very important. On this account light and air baths have much to recommend them, as they are both mild, agreeable and natural.

Man was made to live in air, not in water. Bathed in light, his body is plunged in that element which it will realise as being strengthening and beneficial beyond all others. Those natures, too, that are too sensitive and irritable to face hydropathy can easily stand the stimulant provided by light and air. When rightly administered this tonic is so mild that it can be used in all complaints except fever and acute diseases. The treatment need not be interrupted even at the monthly periods; in case of dysmenorrhœa it often regulates menstruation and alleviates the accompanying pain.

Finally, for nervous, hypersensitive temperaments, atmospheric baths offer the inestimable advantage of hardening them, enabling them to endure damp and cold as well as other variations of temperature.

The sun bath acts quite differently from the

atmospheric bath. Generally speaking it is more applicable in the case of rheumatic or gouty constitutions and chronic kidney troubles.

Rikli also prescribes such baths considerably modified for neurasthenic patients ; two or three a week instead of the daily bath, guarding carefully against conditions of insomnia or excitement to which such sufferers are particularly liable.

After this general account of atmospheric treatment, its application by Nature doctors in Switzerland and Germany now remains to be described.

There will be no shrinking from giving full particulars and instructions, and we must ever remember Bacon's words, "If books were to enter into the slightest details, we might almost do without experience altogether."

PART II.

HOW TO TAKE THE SIMPLE AIR BATH.

Here air is of more importance than light. The bath is usually taken in a bed- or dressing-room, its action being that of a douche of cold air.

The first effect of this cold shock on the patient is an irresistible desire to react by moving about, whilst instinct at once suggests an energetic rubbing of both limbs and body. When the patient is weak and the bare hand is insufficient to produce the necessary reaction, a horse-hair glove is of great assistance. When this surface glow has lasted a minute or two, the patient feels the need of further exercise, and he resorts to such gymnastics as suit his tastes and strength, with the object of ensuring reaction and resisting the feeling of intense cold and the goose-flesh appearance induced by stripping. This sensation rapidly

goes away with exercise, but it will soon return, first, a few minutes afterwards and then at a longer interval, when the bather becomes accustomed to the process. The goose-flesh condition may appear at the end as well as at the beginning of the bath. The exercise must now become twice as brisk, after which dressing begins.

Reaction after an air bath is quite as necessary as after a cold water douche ; the same care must be taken and patients should return to bed if all efforts to effect it are of no avail.

As far as possible the air bath should be taken in front of an open window. If there is a risk of being seen from the outside, a curtain or sheet set up in front of the window forms a sufficient screen.

The judgment of the physician is never to be set aside. He should prescribe every detail of the bath, so that it may correspond with the patient's power of endurance. More especially when the skin needs to be stimulated and an air bath to be taken, does a scientific dose require to be proportioned to the individual case.

The *duration* of the bath depends on the temperature and constitution of the patient. It may well last a quarter of an hour or even longer, but no precaution must be neglected to prevent chill and to ensure reaction on the part of nervous and debilitated patients.

At first many are too delicate to take an air bath before open windows, or even to remain in one for the average length of time with windows closed; such patients would readily take cold or contract rheumatism did not the first few baths last a short time only, besides being given in a tolerably warm room. Even with all these precautions it is a common occurrence for patients to suffer from local stiffness where muscles that have long been idle are called into action; this they attribute to the effect of cold.

Consequently the first few baths must be very short ones. It is often the case that delicate and sensitive patients cannot endure more than two or three minutes at the beginning of the treatment; even later on some cannot continue. After this short interval the goose-flesh appearance may be noticed,

and the patient can only be warmed by partially dressing and then taking the exercises.

Such hypersensitiveness must be taken into account. Fortunately, those whose skin responds so quickly to contact with the air, gain in intensity what they lose in duration. Patients too often find themselves under circumstances in which the state of the atmosphere is such as to prohibit an average length of time being taken for the bath.

No time is more convenient than the morning and evening toilet hour for those whose object it is to harden themselves against cold by exposure of the skin.

To have a fire lighted whilst disrobing is a consideration for many. In such cases the shortened bath is most practical, it being continually borne in mind that the impression of cold and the capacity for reaction must regulate the time thus spent, nor must it be forgotten that subsequent exercise is most important.

All the same, when the patient has become accustomed to the bath he must not lose sight of the benefits to be gained by gradually prolonging it.

The air bath acts not only by means of exposure to the atmosphere, but also by the accompanying gymnastic exercises which can so easily be practised when in a state of nudity.

The body acquires an elasticity and a delight in motion which can only be felt when thus untrammelled by clothing and stimulated by cold. It is a good thing to train oneself early to resist an exaggerated dread of cold. This is the reason generally given for not taking a longer air bath and the beneficial *internal bath* which gymnastics afford.*

More especially in chronic affections, often caused by the poisonous elements of food, must exercise be insisted on, for here it really does constitute an internal bath.

Exercise, strictly speaking, is an internal bath, cleansing the blood, body and muscles from all kinds of impurities, just as the surface of the body is washed by the water bath.

All who suffer from arthritism, nerves or

* It was Gossman who introduced the method of taking up gymnastics when in bath costume in his sanatorium at Wilhelmshöhe, near Cassel, where air baths in winter were first adopted.

dyspepsia, should become convinced of the necessity of exercise ; they should realise that exercise, when properly taken, is a thorough cleansing of the internal organs, and that it is never more efficacious than when performed in the open air. It should not, however, be exaggerated, nor is it absolutely necessary that it continue all the time the bath is being taken.

Everything must be in proportion to capacity, and that of chronic patients or of those troubled with nervous disorders is often very limited.

Once the habit is acquired the bath may readily be prolonged and taken seated for part of the time, if the temperature be favourable. The air bath, which is essentially an air douche on the naked body, by being thus prolonged, is imperceptibly transformed into a light bath. This is the case with business and professional men who take their baths *à la Franklin*, whose custom it was to divest himself of all clothing whilst doing head work.

During cold weather there is another way of taking this bath, and this consists in undressing before the fire so as to be exposed to the flames and the light coming from them as much as possible.

The *bathing hour* varies according to circumstances; good sleepers may take it when retiring to rest, but the activity it causes throughout the organism may provoke insomnia and be too exciting in some cases.

All the same, insomnia is one reason for taking the bath at night time, though it must not be taken as it would be during the day if the object is to cure sleeplessness. In treating this complaint, the bath should last a very short time if the weather is cold, and a good rubbing is preferable to more violent exercises, which in themselves are more rousing than mere exposure to the air.

A wet friction ends this air bath; a towel is wrung in cold water and the body rubbed rapidly from head to foot without subsequent drying. This empirical prescription, the combination of air and hydropathy, often produces the most sedative effects.

The most convenient time is early in the morning when getting out of bed. During the whole of the night the organism has been storing up heat, so that this is the time at which it can most advantageously expend it.

Care, however, must be taken not to dawdle over dressing, this being the only precaution necessary. Many patients, however, would not find this hour suitable; sufferers from nervous complaints especially have not sufficient energy in the morning to take up the gymnastic exercises which form the necessary complement of the bath. There are two solutions of the problem. One consists in shortening the duration of the bath and bringing it to a conclusion by a gentle hydropathic treatment. This compensates for its short duration; the reaction takes place in bed and often another hour of sound sleep is the result, no mean consideration for depressed patients. Another way is to select that time of the day when most energy and strength is attained and vitality has reached its highest point.

The air bath is a means of invigoration which, in spite of its being very gentle and mild, is, all the same, very powerful in its effects. It should be within the reach of all chronic sufferers. Each patient should be able to regulate the duration and intensity according to his state of health and power of en-

duration ; he should determine for himself the most suitable hour. The time chosen will often be early in the afternoon, in a well-warmed room, whilst the sun is shining ; under such conditions only will the first few air baths really deserve their name. Later on they become light baths, since they act quite as much by the power of light rays as they do by contact with the air. This transition from air to light baths being scarcely perceptible makes definition difficult.

Speaking generally, what characterises the air bath in the practitioner's eyes is the mode of action and the duration ; it acts like a douche of cold water and does not last longer than a few minutes.

On the other hand, the light bath only gives its best results when of considerably longer duration and taken in daylight.

HOW TO TAKE THE LIGHT BATH.

The light bath, called also light and air bath, or simply, as Rikli has it, atmospheric bath, consists in exposing the whole body surface to the open air, the dominant factor in which is light.

In considering this subject the first thought likely to enter our minds is that such baths cannot be taken in countries of our latitudes. The great populariser of atmospheric treatment, who has now been prescribing it for half a century, has answered this objection by giving us his personal experience. Rikli has had the patience to take light and air baths under every conceivable atmospheric condition, and in 1869 he generalised his theory, boldly convinced that they ought to be taken *very early in the morning*, if possible, before sunrise.

This method has become common in Switzerland and Germany, and his ideas are now receiving recognition in the application of light baths in most of the sanatoria abroad. In his opinion, it is "in temperate climates that light and air baths, with their various results, can best be taken."

This is easy to explain : The first condition for making the best use of light and ensuring its having a preponderating action is to take a sufficiently long bath.

In the light bath, heat is rather to be

avoided than sought if one's object is to take it for a tolerably long time ; for after a certain degree of heat the bath cannot be prolonged. Thus it is easy to understand that, far from being a common practice in hot countries, as is generally supposed, it ought to be adopted in temperate climes.

The *right temperature* for atmospheric baths may vary from 60° to 85° F., but the most agreeable and beneficial to the skin is from 64° to 68°. In such a temperature the bath may be prolonged for hours, once the habit has been acquired. Above 85°, the heat being too great to be endured for long, is rather enervating, because all the tissues are relaxed, and the nature physician then calls the light bath by the sufficiently explicit name of sun bath.

Below 60°, the bath is still very helpful, but it must be accompanied by more exercise. Between 45° and 47°, patients suffering from nervous complaints derive great advantage, but every care must be taken not to remain too long in the bath ; often five minutes is more than enough.

This bath may be taken in dull, cloudy weather, even when it is damp or rainy ; such as have no training, however, find it far more difficult to endure the cold, and can bear it only for a few seconds to begin with. They should start with air, rather than with light baths.

This was how I often took my bath at Godesberg on certain mornings in September, when the thermometer was below 53°. Having had no training, I could endure it for only seven or eight minutes, whilst my companions readily remained for half an hour in the bath. The impression produced on me was quite distressing, whilst the effect on them was anything but unpleasant. With the thermometer at 60°, and up to 68°, the bath was far easier to take ; and after the initial shock I willingly remained for half an hour, moving about the whole time.

To resume : In Rikli's opinion the bath must be a *methodical chilling* process to which one must train oneself. This is why the temperature at which it can be taken is quite a matter of habit.

He began by taking the baths at the age of 42, and never discontinued them for nineteen winters, in spite of the most sudden changes of temperature. At an altitude of 1,500 feet he took over 3,000 atmospheric baths of an average duration of two hours. This, however, was evidently an exaggerated state of things, one not to be imitated.

He sends his patients away on the mountains to take a really conscientious sun or air bath. In summer they must rise at least half an hour before sunrise, as it is better to begin the bath at the coolest moment of the day. During the bath they partake of breakfast.

When the weather is hot the bath may be prolonged for hours if the body is in training ; the pleasures of a *far niente* may be indulged in, whilst the patients walk or lie about on the grass.

When the air is warm with sunshine, the meal may be digested whilst the bath is being taken, or the patient may proceed direct from the bath to the table.

On the other hand, if the air is cold the action of the temperature on the circulation of

the blood makes prudence necessary. In this case no meal should be taken after the bath until half an hour has passed. A couple of hours should elapse before undressing.

Generally speaking, the duration of a bath must be regulated not only by the atmospheric conditions, but also by the effects and impressions produced on every individual patient.

Effects of the Air Bath.—The first effect resulting from the contact of the skin with the fresh air is that of bringing about a general surface feeling of cold which causes a sensation of shivering and a goose-flesh appearance. This at once suggests rubbing oneself and moving about, whereupon the chilly feeling and the goose-flesh appearance rapidly disappear.

Both the duration and the method of taking an atmospheric bath must be determined by its effects on different patients. The main thing is to bring about reaction by means of friction and exercise ; gymnastics are preferred by young men, whilst children can run about. Gardening, splitting and sawing wood are also greatly to be recommended ; everyone should choose his own method of recreation and of

effecting reaction in the way most agreeable to himself. When it is really hot and atmospheric conditions invite repose, there is no objection to taking rest, but the bath should never terminate without a certain amount of exercise.

“The chill which returns after varying periods,” says Rikli, “and the accompanying goose-flesh appearance, are signs that reaction must be effected by dressing as speedily as possible.”

It would be bold to affirm that the return of a goose-flesh appearance was a sure sign that the bath must come to an end; for beginners, at any rate, that would be too delicate a criterium. All the same, it is advisable that the first few baths be of short duration. Their frequency, too, must be fixed as each one finds convenient, and dressing should never be deferred whenever the chilly feeling returns. In the case of the first few baths, a quarter of an hour should not be exceeded. Reaction after this bath is as imperative as after any of the other kind.

The light bath, which is powerfully re-

frigerant, calls for a correspondingly warm reaction ; in temperate regions this is difficult to bring about when the blood is chilled. If reaction is insufficient, the feeling of chill returns on going indoors.

The life-giving effect of the light and air bath is likely to make beginners too blindly enthusiastic, and to prevent them from reflecting that a chill may be dangerous. This cannot be too strongly impressed upon them, as well as the fact that after the bath rapid dressing and rather violent exercise or a good walk are *indispensable precautions*.

Exercise should produce a penetrating warmth throughout the body, and this should only be followed by rest when the bather can return to a place where he is able gradually to resume his normal temperature, without incurring the danger of a chill. The sensation after a bath is always a test as to the benefit derived therefrom.

After Effects of the Bath.—If this has been taken under sound hygienic conditions, it will be followed by a most exhilarating and pleasant feeling. When prolonged too far in the case

of one whose skin is not sufficiently accustomed to the tonic effect of light and air, far from experiencing relief there is a sensation of overstimulation.

Fatigue may be experienced during the day, whilst at times the discomfort may be still more pronounced and the patient suffer from excessive weariness, varied by aches and pains in the head or back, accompanied by a little feverishness. Not infrequently the overstimulation shows itself on the skin in the shape of erythema. This eruption is not only accompanied with burning and itching of the skin, but also with aches and pains and a feeling of over excitement, not indeed sufficiently intense to produce fever, but quite calculated to bring on insomnia.

Such undesirable results of the light bath when carried to excess, prove more clearly than a host of arguments that a certain amount of moderation must be used in the application of a bath which Rikli appropriately designates as *methodical cooling*.

Care must also be taken as regards *dress*. In most cases the garment used is similar to

the one employed in sea or river bathing, but it should be made of a material more permeable by air; delicate patients may retain their shirts for the first few days.

It is to be regretted that these baths have been called nude baths. Except in the case of a few fanatics this is anything but a true description of them. Baths are only taken nude if they are sun baths or administered in one's own room, when no more covering is required than for any other kind of bath taken in privacy.

It is best to leave the head uncovered unless the sun's heat is sufficiently intense to justify wearing something as a shade.

Patients should also go about barefoot, unless the nature of the soil or their own sensitiveness renders sandals or straw slippers requisite.

These toilet details may appear, *a priori*, unimportant, but really they are essential points, not to be overlooked; bare feet and uncovered heads are, to a certain extent, obligatory.

It is remarkable what importance Rikli

attaches to walking barefoot. When one reflects that this was recommended in the times of Galien, one cannot help having some consideration for the practice which was known in ancient times as the *dew-bath*, and extolled by Rikli with an amount of enthusiasm which is really contagious.

The exposure of the feet to the air, or *walking barefoot*, must be mentioned here as this methodical cooling of the extremities is nothing else than a local air bath, accompanied by exercise so long as it lasts, the reaction coming on afterwards.

I wish to dwell at length on this particular practice, and again quote Rikli, who, along with all nature physicians, reproaches doctors for objecting to it by reason of its simplicity.

“Walking barefoot, or rather the variations of temperature which the feet experience during this practice, determine a multiplicity of reactions on all the rest of the body. Not only is it the best remedy for chronic cold feet, it also stimulates the intestinal functions and acts as a counter-irritant on chest, throat and head. It affords *great relief in the case of headaches, or cures them.*”

“Nature,” adds Rikli, “has thus offered a method, as simple as it is powerful, of overcoming all the various disorders of the brain.”

After describing numerous cases in which walking barefoot is recommended, and mentioning the importance of its tonic action in most chronic affections, he insists on the methodical and gently-graduated way in which the patient must be trained.

At first this consists of rubbing each foot for two minutes with a wet cloth, then putting on shoes and stockings and walking about. Once accustomed to this preliminary exercise the patient should walk on bare boards, then on grass, afterwards on wet grass, carefully regulating the duration of the exercise and being certain that reaction really does follow. This digression is justified by the supreme importance attached to walking barefoot.

The *duration* of atmospheric treatment is also an important question. *At first sight* it would appear that a treatment which, after all, is nothing but a return to nature, might be continued permanently and, if no disorder ensues, prolonged indefinitely. Nervous pros-

tration may after a time be produced by this stimulation of the whole organism, administered with an energy varying according to circumstances, age, constitution and the time of the year. General discomfort may be experienced, or indigestion or rheumatic pains. It is the same kind of prostration that the practitioner deals with every year in the case of patients who have remained too long at the seaside or in thermal resorts, and appears almost always to be combined with unfavourable hygienic conditions, the principal factors of which are over-stimulation and over-feeding. It is almost impossible to provide against this state of things, and so long as there is no objection to their use, light and air baths should be regularly continued.

If nervous prostration takes the form of a slight attack of rheumatism, then moderation in this treatment must be adopted; but if the pains increase, suggesting that all fatigue and over-stimulation be abandoned, then atmospheric baths must be stopped at once, and hydropathy, in the shape of lotions, partial packs or hot baths, must replace them for the time being.

The question as to *where* the baths should be taken is still to be considered. "As soon as people realise," says Rikli, "that light and air are more precious than water baths, our municipal centres of population will have special parks for light baths in summer and glass-roofed arenas for winter use."

That time is still far off, and we must not wait for it before establishing atmospheric baths here like those abroad. Dr. Oberdörffer has fitted up a bath in the grounds of his sanatorium. It is enclosed within palings, 200 feet long by 100 feet wide, and contains a clump of fir-trees and some underwood, divided into two sections, one reserved for ladies, the other for gentlemen.

For practical purposes such a reserved space may be made smaller, say, 80 feet by 30 feet, and enclosed in a paling 8 feet in height. It may simply consist of a plot of grass left as it is, including trees which need not be disturbed, as they afford patients the opportunity of readily passing from shade to sunshine.

In one corner of the enclosure should stand a shelter, a few yards long, with a wooden floor to serve as a dressing-room.

The Sanatorium at Bollendorf, the appliances of which are all-sufficient, possesses the qualification of being as simple and primitive as can be.

Neuen's light bath, shut in by rails about 8 feet high, is only 33 to 40 feet long, by 16 to 20 feet wide, the ground being covered with a thick layer of sand.

Anyone who has a garden attached to the house can easily arrange an enclosure for light baths ; if found more practical, the paling may be replaced by mats and sheets. If canvas is used it can be added to as required at very little expense ; the larger the enclosure, and the more exposed to the sun, the better.

This latter can often be made with trees as a natural boundary or by taking advantage of a wall. As Dr. Nyssens, of Brussels, says : "With a few boards or poles for stretching canvas upon, a small number of seats and blankets, everything is complete, and the cost need not be more than £3 or £4, whilst the resulting cures will be really astounding."

There remains one question, often asked by advocates of the air bath : when open-air baths

prove impossible, is it not feasible to take them indoors?

Balconies or flat roofs, so common in large towns, make splendid bathing spots, which it needs but little ingenuity to shut in for this purpose. Flat roofs have the advantage of being veritable sun-traps, so to speak, where it is easy to graduate the heat, but care must be taken that they be sufficiently ventilated.

When such advantages are not obtainable, atmospheric baths may be taken indoors, the results being far superior to those obtained by hydropathy, practised under similar conditions.

In such a case the light bath should be taken in as large a room as possible, where the patient can move about and practise gymnastics, and where there is plenty of air, light and sunshine. The windows must be left open, so that there is thorough ventilation, and draped only with muslin curtains to screen the bather from observation. This way of bathing is often the best for invalids who have begun their air treatment in a sanatorium and wish to continue it at home.

If beginners cannot go to a sanatorium they are recommended to take the first few baths under the direction of a doctor conversant with this natural method of healing disease.

When the warm weather is past the light bath must generally become an air bath of short duration, unless there is a fire in the room. Dr. Oberdörffer advises his patients to continue the treatment at home, taking an air bath for a few minutes and following it up with a cold hip bath for half a minute. The bather wets his whole body with his hand and brings about an energetic reaction whilst undressed. If the weather is cold, he wears an under-garment.

In the bath taken under such conditions, reaction is the important point to consider; anyone who has had experience of atmospheric baths will easily understand why Rikli often observed that, on returning home, his patients derived no further benefit from their air baths. In such cases the physician's supervision becomes altogether indispensable.

Combination of the light bath with hydro-pathy.—The light bath in practice is associated

so intimately with hydropathy that they may be said to go hand in hand with one another. Still, we must see under what conditions these two factors combine. *When the temperature is suitable*, and the patient can readily get warm by exercising, there is nothing better than a general lotion *during the bath*. In this way there is produced a damp heat which is extremely beneficial to the body.

By this time exposure to the air combined with exercise has developed sufficient energy throughout the system to evaporate the moisture on the surface of the body if motion is kept up.

But these conditions can be realised only when the temperature is suitable, and the patient sufficiently in training to develop warmth easily. If the heat of the sun is not sufficient, then *air and water must be used alternately, not together*.

After the bath, energetic exercise must be taken, and when, after a thorough reaction, the body has been for some time at rest, a lotion, douche, or any other application may be given. This is the method commonly adopted in sanatoria.

Rikli makes use of all the resources of atmospheric treatment. When reaction is thorough and the patient has regained his normal temperature, he prescribes a vapour or a sun bath when a couple of hours have elapsed ; this he considers the best complement of the light bath. For the past twenty years, thousands of atmospheric baths have been taken by his patients without a single accident or disastrous result of any kind, this he ascribes to the strict rule—imposed on all—of taking a sun or vapour bath after the cooling air bath, thus restoring a balance of heat.

This supplementary vapour or sun bath can be had only in a hydropathic establishment. When atmospheric treatment is taken at home the best method of replacing the action of the vapour bath is to carry woollen underclothing with one and put it on directly afterwards, walking about until abundant perspiration ensues, and then to change the underlinen again, being careful all the time not to catch cold.

This is Rikli's advice to his chronic patients, after training them up in the mountains, still

it is not always feasible even in sanatoria. When the patient's strength or the temperature do not warrant such treatment, the sun bath may be replaced by various hydropathic applications, or vapour or electric light baths.

PART III.

HOW TO TAKE SUN BATHS.

This bath consists in exposing the surface of the body to the rays of the sun when this latter is powerful enough to induce perspiration. Practically this result can only be obtained, for the most part, by wrapping the body in a blanket after the exposure has taken place.

But few explanations are necessary. A mattress covered by a blanket only should be placed looking to the south, well sheltered from the wind. On this mattress, the patient lies, divested of all clothing. The head or the nape of the neck may be protected from the sun by a screen, a fan, wide leaves or the bough of a tree, but no hat must be used as this might produce congestion. A beginner should change his position every two or three

minutes or even oftener, turning on his right or left side, back or face. When two-thirds of the time for this bath have elapsed, the patient must wrap himself entirely in the blanket.

When subjected to the direct rays of the sun the body is thoroughly heated, though one does not perspire, as a rule. Once, however, the body is wrapped in a blanket, abundant perspiration ensues. During the first two-thirds of the bath the patient is quite unclothed, exposed to the sun's rays; this is called the direct bath. The remaining third, whilst he is wrapped in a blanket, may be termed the indirect bath.

For beginners the sun bath should last for a quarter of an hour only, but afterwards the bath may be prolonged for an hour or even longer, for the patient experiences a feeling of comfort and relief all the time.

Should perspiration begin whilst the patient is unclothed, by reason either of the sun's heat or of his enfeebled condition, wrapping up in a blanket must be dispensed with, as such a course would be of no avail and would only weaken by inducing excessive perspiration.

The best time for taking the sun bath is after ten in the morning, or early in the afternoon. In cloudy weather the bath must sometimes be prolonged a quarter of an hour, and when sunshine is altogether lacking—which is too often the case—it may be changed into a light bath. At the commencement of the treatment it is not unusual for the sun bath to be followed by headache or a feeling of languor; such symptoms indicate that the bath must not be prolonged. This is often the case with patients who do not perspire, and for that very reason, when things are so, there must be no hesitation about inducing perspiration by means of the blanket wrapping.

Human beings, like plants, can thrive only under the combined influence of sun and water, it is through the action of water that the effects derived from the sun bath must be helped forward and disturbances in the circulation of the blood avoided. At first sight it might appear that the sun ought to have a greater effect on the unclothed than on the clothed body, but such is not the case. Look at Nature, says Kuhne, grapes are always

found under the sheltering leaves of the vine ; when thus protected they ripen better, whilst they become shrivelled and sour if exposed directly to the sun's rays. It is the same with all other fruit trees, the protection of the leaves is required for the ripening of fruit.

What we observe in the case of fruit may also be noticed in the human body ; the action of the sun differs according as it is clothed or unclothed. Kuhne also remarks that the clothed body perspires readily, the unclothed body, seldom.

The sun *closes the pores* of the exposed skin, though it attracts the waste matter from the body to the surface and may bring about, under these conditions, erythema and dermitis, both of which are painful and distressing ; this is the reason, if the pores of the skin are closed, that good results follow such an exposure to the sun's rays. The sun's action on the clothed body is quite different. If the body has the usual clothing, an extremely agreeable and beneficial feeling results, the pores of the skin open, become warm and moist, and perspiration takes place.

The nature physician assures us that this action is intensified if the unclothed body is covered with some substance containing as much water as possible, green leaves being recommended. To ascertain the effect it would be easy to cover the body partly with leaves, partly with clothes.

I mention this original experiment as giving some idea of the strange practices one sees abroad in establishments which are under the control of empirics. It is not without a certain piquancy, and evidently points to a principle worth examining, one which may be of benefit in the application of sun baths. The idea intended to be conveyed is that it is important for the skin to act when taking the sun bath, and if necessary such action should be induced by some covering or other, so as to obtain agreeable and beneficial results.

Besides, this experiment is anything but recent. Sun baths date from the time of the Greeks, who called them *arenaria* (arena, sand) because they also covered the bodies of their patients to protect them from the direct rays of the sun. The process they employed con-

sisted in burying a portion or even the whole of the body up to the neck under a thin layer of sand that had previously been warmed by the sun's rays. Such a cure is well known to be appreciated by rheumatic old sailors.

With reference to sun baths in sand, it must here be remarked that experience has shown it to be unwise to expose the body directly to the sunlight, but rather to cover it with a layer of sand five or six inches thick. It is really this sand bath that constitutes the sun bath, giving the same beneficial results and demanding the same precautions.

Sun baths may be adopted in numerous cases. Generally speaking, they are prescribed in cases of rheumatism and gout, obesity, catarrhal bronchitis and all diseases connected with arthritism. Patients of a tolerably robust constitution may take one bath daily, whilst in treating obesity two baths every twenty-four hours are often necessary. These baths deserve to hold an important place in the treatment of chronic female disorders.

They also produce wonderful results in

sufferers from uterine hæmorrhage, as they have a powerful styptic action. They stimulate the functions of the skin and help to remove the congestion of the abdominal organs, which effect immediately follows, thus justifying their use by those who have suffered for any length of time from abdominal irregularity. The intense action of the sun bath resembles that produced by a combination of light and perspiration baths, it forms a therapeutic agent that has an immediate effect on the whole body.

Rikli does not shrink from employing it as the best complement of the air and light baths even in cases of anæmia and neurasthenia, in such cases, however, he does not prescribe it oftener than two or three times a week.

After the analogy just traced between the sun bath and the sand bath of the ancients, it is interesting to remember that these latter have long been regarded as most efficacious in a large number of chronic disorders. Hameau prescribed them with success when the symptoms were scrofulous or lymphatic. Marchant and Pouget did the same in cases of chronic

rheumatism, cures being effected after from six to fifteen baths. Their efficacy in cases of anæmia, chlorosis and rickets is indisputable.

As in all other powerful therapeutic processes, the sun bath often excites weak or nervous patients to such a degree as to prevent sleep. Sometimes after the bath they complain of a feeling of weakness which distresses them. The cause of such symptoms is almost always the result of baths taken too frequently or unreasonably prolonged; the remedy is evident, as the cure may be completed by a slight hydropathic treatment.

The very method of taking a sun bath explains by itself why there can be no reaction, since the system, instead of losing heat, has actually stored it up. On the other hand, says Neuens, a close observer, after such a heating bath there are several reasons why cooling should be effected, as thus an enormous amount of heat is eliminated, the body is helped to perform its functions of perspiration and cleansing, and the nervous centres, overcharged with blood and heat, are allowed freer action.

Air and water constitute two of the most practical refrigerating elements ; whilst an air and light bath is delightfully refreshing after a sun bath, especially for persons afflicted with nervous troubles.

A general bathing lasting half a minute and without towelling, or simply the damping of the whole body with a wet cloth, is the most practical hydropathic application after a sun bath. This is the quickest way of enabling the skin to regain its normal temperature and remove the congested condition of the nervous centres ; it is also the best on condition the skin is not rubbed dry afterwards.

With the object of rendering this work eminently practical, we must now consider the part which atmospheric treatment should occupy in thermal resorts and sanatoria.

HOW THE ATMOSPHERE SHOULD BE UTILISED IN THERMAL RESORTS AND SANATORIA.

Atmospheric treatment should no longer remain the monopoly of the foreign sanatoria of Germany and Switzerland. It is a method of

cure at once powerful, simple, natural and pleasant, can be used every day and applied in all kinds of cases.

It must before long become an important factor in the treatment and hygiene of most chronic cases. Its application is clearly indicated in a number of thermal resorts, such as Evian, Brides, Vittel, Contrexéville, Plombières and Nérís, in all of which places air ought to be looked upon as of equal value with water. It should become and remain as the doctors of old were so fond of saying: "The best food and medicine in the world."

Atmospheric treatment, by reason of its powerful natural virtues, should be employed for disinfecting the body, calming and restoring the nervous system to a state of normal health, and conferring untold benefits on those afflicted with arthritism and nervous complaints. The wonderful results of a three weeks hydro-mineral treatment are quite puzzling to such as have doubts as to the efficacy of these waters.

The invariable objection of patients against these thermal resorts is that "it is pure

water with nothing in it" to which Huchard wittily replies that "this is the very secret of its success and efficacy." If we reflect we may well wonder if this washing of the body should be the whole of the treatment and nothing further remains to be said of the hydro-mineral treatment of chronic cases.

Beau's triple maxim: "Cleanse the blood by diluting drinks, the intestines by purgatives and the skin by cold lotions" (to which I would add, "cleanse the whole of the system by utilising the improvements of the present age") may well become the fundamental method of treating infectious disorders by reason of their short duration and their natural tendency towards a cure.

It may, however, be asked if this is sufficient in the case of complaints which have no natural tendency to disappear, but which, on the contrary, become worse as time goes on?

Bathing and disinfection in every form are wonderfully efficacious in repairing the harm done and in eliminating refuse, irritation, inflammation and functional disorders, all of which are the consequences of poisons in the

system ; but they do not appeal to the living forces of the organism with sufficient power to combat in a lasting fashion, what Robin calls "functional disorder " and those hereditary ills which are the origin of most of the diseases which call for a hydro-mineral treatment.

Still, if you wish to prevent a condition which is often incurable it is this functional disorder, this morbid constitution which some attempt must be made to reach and overcome.

Wherever excessive functioning of the organ is the rule, the atmosphere shows its power when it can manifest itself in the form of air, light and sun baths.

Atmospheric treatment, certainly the most natural source of physical energy is, as has been stated above with regard to the therapeutical stimulation of the skin, at once a supply of vigour to the whole organism, the best means of removing the congested condition of the abdominal organs, and, taken in the form of a sun bath, the depurative which best penetrates and helps to purify the human body, being at the same time the most certain and energetic method of affording a tonic and sedative action over the nervous centres.

Atmospheric treatment is not only the remedy for all the evils attending on poisoning and inflammation, it is also a vital reorganising medicine which allows of the organs coming under better functional conditions, supplying vigour by which the whole body benefits.

It is in this way that we should regard the use of atmospheric agencies in the treatment of chronic maladies and the part they ought more especially to hold in our thermal resorts.

All the same, let us make no mistake, the past lives of those who visit our watering-places show that the weak spot is nervous sensitiveness.

Evian, Contrexéville and similar resorts are effective rather by "what they carry out of the system than by what they introduce into it." Doubtless they carry off a great deal but they also introduce an imponderable though most important element. This twofold property is no monopoly of mineral waters. A vegetarian diet is, in a way, a mitigated water cure. The liquid contained in fruits and vegetables is both a diuretic water and a concentrated solution of the potential.

The experience of vegetarians is that this potential is quite as abundant in wholesale fruits and vegetables, ripened in the sun and impregnated with its life, as in mineral waters.

This vegetable water or liquid effects gradually and by the same process what diuretic waters bring about very rapidly.

The present-day medical faculty have not sufficiently recognised this action. After all other methods have failed, wonderful results have often been obtained by a vegetarian diet, the only secret of which is the methodical application of a food at once tonic, sedative and depurative.

Auto-intoxication, or self-poisoning, is the process which goes on in all chronic complaints; the functional weakness not merely of the emunctory organs, but often, too, of the digestive and nervous systems, is constantly being discovered to be at the root of these complaints.

From the fact that a vegetarian diet operates in the same way as diuretic waters, it offers the inestimable advantage of assisting and prolonging their effects until they become

lasting ; such a diet strengthens the digestive canal and the nervous centres, and prevents the poisoning of the system.

Such diverse uses ought to cause it to be held in high esteem in all cases of arthritism, neuro-arthritism and neurasthenia ; in a word, in all chronic cases of poisoning by food.

As regards Evian, Landouzy says that the diuretic treatment there is all the more important since half its clients at least owe their ruined health quite as much to errors in diet as to infectious complaints ; there are fewer of the latter than of the former, as is evidenced by so many cases of sufferers from liver complaint, gastritis, uricemia, &c., who go there to obtain a thorough internal cleansing.

Water is capable of acting only for a time ; a diet in which vegetarianism predominates is the only thing that has a lasting effect.

At the present time, a faulty nutrition, the cause of neuro-arthritism, is so general that it may be considered the characteristic of the age. It has been my object to call attention to the prevalence of neuro-arthritism and to overcome it by applying a daily remedy which

awakens vital energy. A diet evolution should be prescribed and the following formula given to it: *Fruitarian in the morning, mixed at noon, and vegetarian in the evening.*

In Germany the importance of a food hygiene has been recognised in thermal resorts by the providing of tables for special diets. A special diet and atmospheric treatment are strongly to be recommended, and our own doctors might well pay greater attention to these points.

In hydropathic establishments especially should air and diet go hand in hand. It is through the stomach, or in other terms, by diet, as Leven says, that nervous centres can best be treated, and it is through the skin, that is by means of the air cure, with its restorative and hardening effects, that the bowels are prevented from becoming congested and the functions of the emunctory organs regulated.

If the fitness of grouping together these different branches of therapeutics be a matter of discussion as regards thermal resorts, there can be no doubt as to its advisability in the case of hydropathic establishments and sanatoria.

Their introduction into these establishments is inevitable, and before long, air, light, and sun baths, along with a vegetarian diet, will be considered as important here as they are abroad, and our sanatoria will then be occupied by chronic sufferers desirous of giving a trial to this new method of treatment.

Conclusions.—I shall certainly be found fault with by my scientific readers for the consideration I have shown towards empiricism. Had I ignored the lessons thus to be learned, I should have lost a rare opportunity of profiting by my stay abroad. It would have been unfair not to give an account of the air cure as applied for the past half century, and its special characteristics would have been suppressed had I not alluded to the various practises of nature doctors. At any rate the practitioner will in future be supplied with such information as is necessary for answering otherwise than by sarcasm or silence such patients as, on the recommendation of other sufferers, leave home in greater numbers every year to be treated by air, light and sun baths.

Still, this little treatise calls for a more positive conclusion.

Man is the spoilt child of Nature. Through every part of his body brought into contact with physical agencies, she is continually infusing vigour and vitality into him. It is for us to benefit by such resources, it is our business to understand that air, light, sun and water, are most powerful natural agencies, and that the simplest and most effective means of renewing health and strength is to take such baths as regenerate the system by instilling into it the elements most necessary to life.

France is the country specially endowed by nature for such baths. Incomparably superior to Switzerland and Germany in this respect, the inestimable advantages of an air cure may be had all the year round, this superiority consisting in the wider variety of climate.

Every climate has its own patients who are attracted there, restored to health and strength. *In winter*, especially, the South of France, which is justly called the "land of sunshine," has unwonted charm and attraction. Then there are the exceptional climates of the southern and south-western shores, where all through the cold weather, atmospheric treat-

ment may be given at a time when all the mineral water establishments are closed.

Air, light, and sun treatment is available not merely to such as have delicate chests, but to sufferers from nerves, or anæmia, or weakness of any kind. All such need an increase of oxygenation and a gradual and prolonged stimulus for the regaining of strength; they need also increased endurance which will permit them, at a later date, to face once again the climate they have had to flee from.

In this respect the Riviera will be found to enjoy exceptional advantages, and anyone who has once enjoyed the advantages accruing therefrom, will agree with Michelet when he says: "Renewal of youth will be found to consist in the science of emigration and the art of acclimatisation."

It is not difficult to realise that the South of France has been termed, "The Italy of the Gauls," and that a judicious change of climate is, as Michel Levy says, "a rebirth to renewal of life."

The practitioner can no longer despise the help afforded by the air treatment, relegating

to a back place methods of hygiene which have so important an action on health. We can form but a faint idea of the powerful effects they produce.

Until light and sun baths are removed from the region of empiricism, "that humble source and origin of all progress in the healing art" as Guimbail, calls it, and until these resources have further light thrown upon them by the clinical experience of our teachers, we should each examine into this natural method of cure to the best of our ability. So far as we can, let us practise it scientifically. Science is, and for the practitioner really worthy of the name, should always remain, the light which illuminates and points out the path as well as the lever which increases his sphere of action enormously.

What Carl Vogt said in one of his lessons will in this way be confirmed: "One skilled in practice is always ahead of a mere theorist," on condition that, whilst making his researches, he follows the advice given by Pasteur to Raulin "Never accept anything but experience as your guide."
